

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer					
Product line		: NEMA Premium Efficiency Three-Phase		Product code : 11485814	
				Catalog # : 15036XT3G445TS	
Frame : 444/5TS		Cooling method : IC411 - TEFC			
Insulation class : F		Mounting : F-1			
Duty cycle : Cont.(S1)		Rotation ¹ : Both (CW and CCW)			
Ambient temperature : -20°C to +40°C		Starting method : Direct On Line			
Altitude : 1000 m.a.s.l.		Approx. weight ² : 2182 lb			
Protection degree : IP55		Moment of inertia (J) : 39.1 sq.ft.lb			
Design : B					
Output [HP]	150	125	125	125	125
Poles	2	2	2	2	2
Frequency [Hz]	60	50	50	50	50
Rated voltage [V]	460	380	400	415	415
Rated current [A]	161	161	153	148	148
L. R. Amperes [A]	1129	1063	1117	1169	1169
LRC [A]	7.0x(Code G)	6.6x(Code F)	7.3x(Code G)	7.9x(Code H)	7.9x(Code H)
No load current [A]	39.0	38.5	41.0	43.0	43.0
Rated speed [RPM]	3570	2970	2975	2975	2975
Slip [%]	0.83	1.00	0.83	0.83	0.83
Rated torque [ft.lb]	221	221	221	221	221
Locked rotor torque [%]	200	190	200	229	229
Breakdown torque [%]	250	240	270	290	290
Service factor	1.15	1.00	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K	80 K
Locked rotor time	55s (cold) 31s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)
Noise level ²	86.0 dB(A)	83.0 dB(A)	83.0 dB(A)	83.0 dB(A)	83.0 dB(A)
Efficiency (%)	25%	93.1	93.1	92.9	93.0
	50%	93.6	93.6	93.6	93.6
	75%	95.0	94.1	94.5	94.5
	100%	95.4	94.5	95.1	95.0
Power Factor	25%	0.62	0.62	0.59	0.56
	50%	0.85	0.85	0.83	0.81
	75%	0.89	0.89	0.88	0.87
	100%	0.90	0.90	0.89	0.89
Bearing type		Drive end : 6314 C3	Non drive end : 6314 C3	Foundation loads	
Sealing		: Oil Seal	: Lip Seal	Max. traction : 615 lb	
Lubrication interval		: 3604 h	: 3604 h	Max. compression : 2796 lb	
Lubricant amount		: 27 g	: 27 g		
Lubricant type		: Mobil Polyrex EM			
Notes					
This revision replaces and cancel the previous one, which must be eliminated. (1) Looking the motor from the shaft end. (2) Measured at 1m and with tolerance of +3dB(A). (3) Approximate weight subject to changes after manufacturing process. (4) At 100% of full load.			These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.		
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DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer : _____

Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermostat - 2 wires	1 x Phase	155 °C

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TORQUE AND CURRENT VS SPEED CURVE



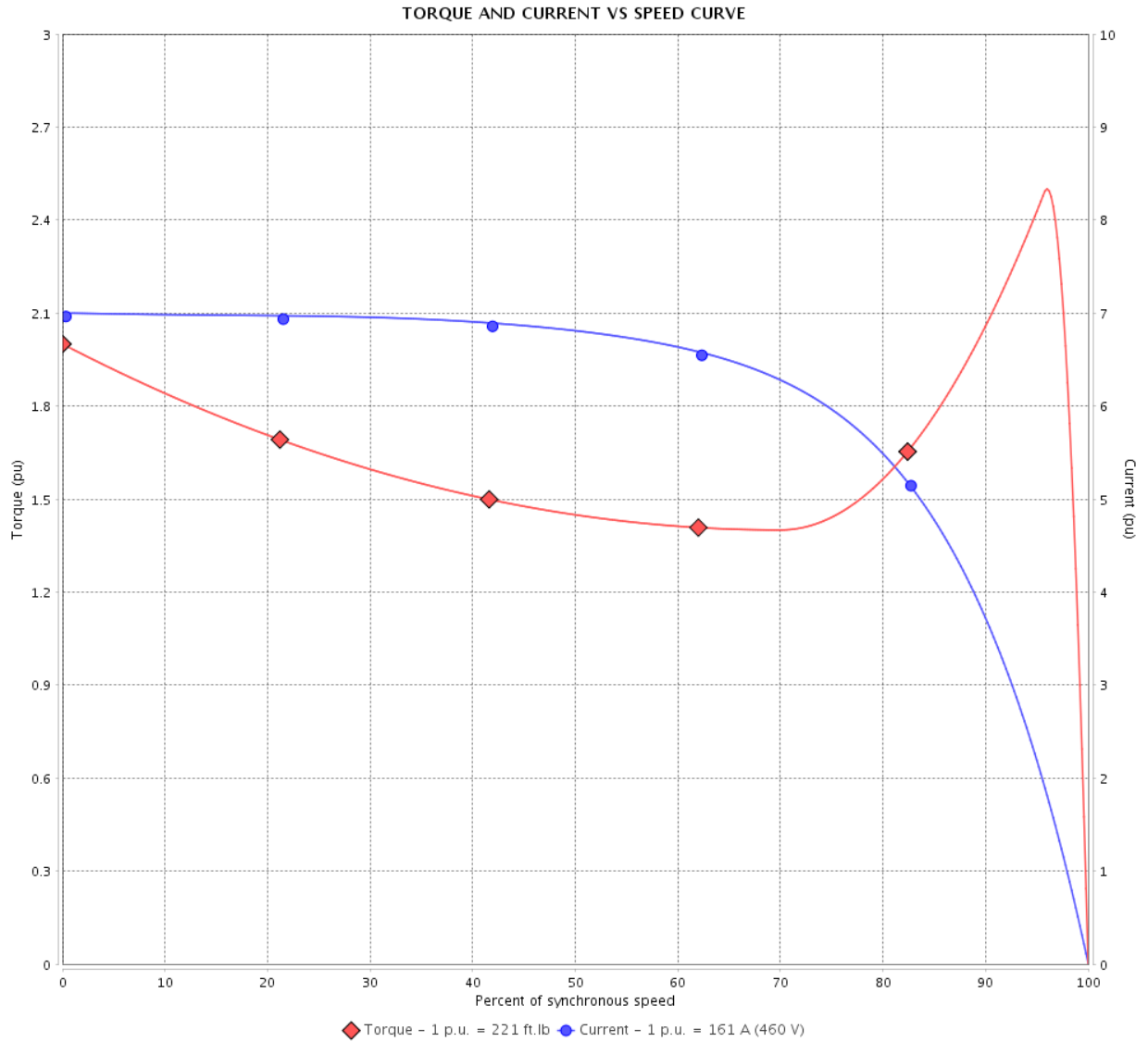
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11485814

Catalog # : 15036XT3G445TS



Performance : 460 V 60 Hz 2P

Rated current	: 161 A	Moment of inertia (J)	: 39.1 sq.ft.lb
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 221 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 3570 rpm	Design	: B

Locked rotor time : 55s (cold) 31s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



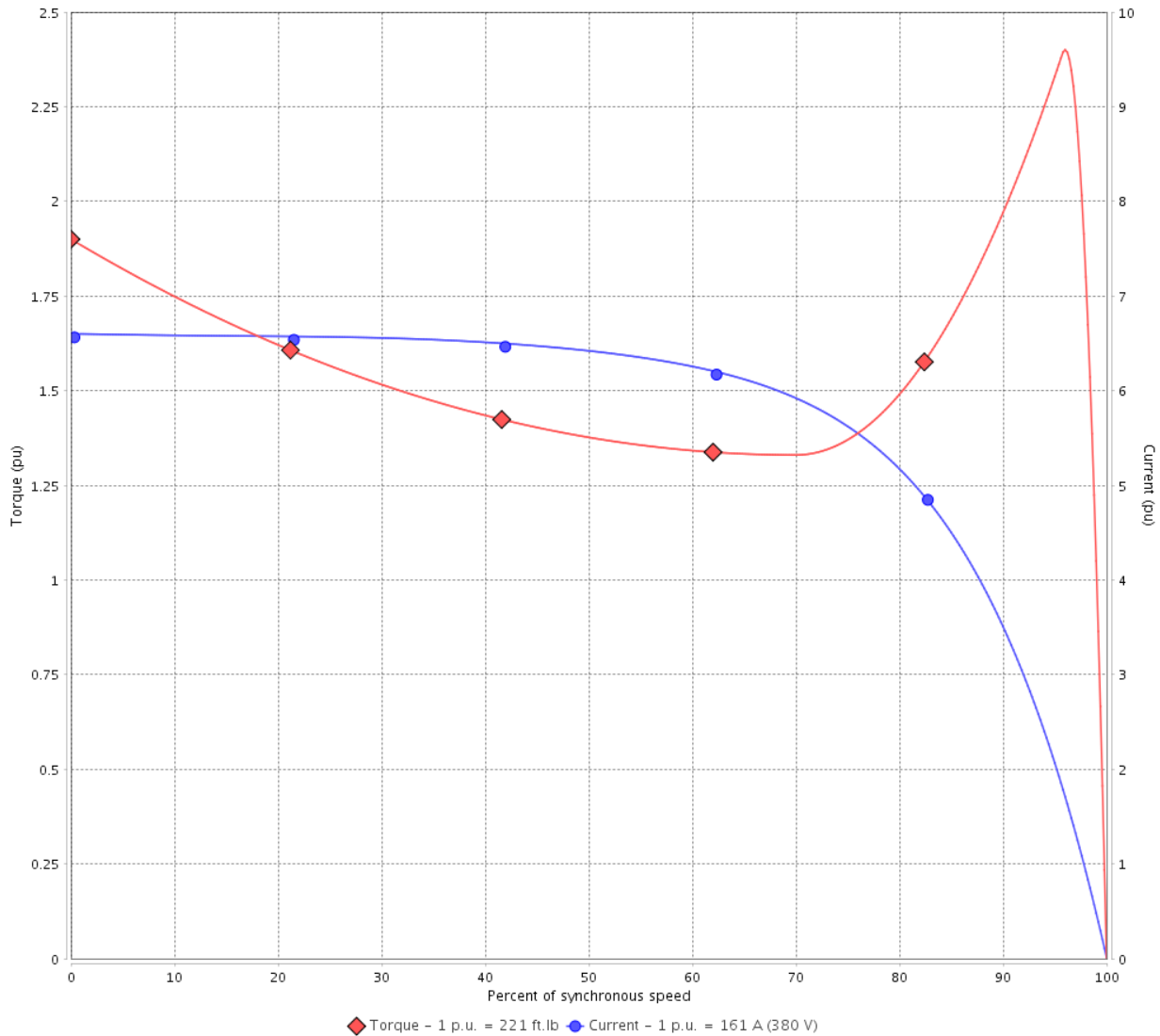
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11485814

Catalog # : 15036XT3G445TS

TORQUE AND CURRENT VS SPEED CURVE



Performance : 380 V 50 Hz 2P IE2

Rated current	: 161 A	Moment of inertia (J)	: 39.1 sq.ft.lb
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 221 ft.lb	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 240 %	Temperature rise	: 80 K
Rated speed	: 2970 rpm	Design	: B

Locked rotor time : 45s (cold) 25s (hot)

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TORQUE AND CURRENT VS SPEED CURVE



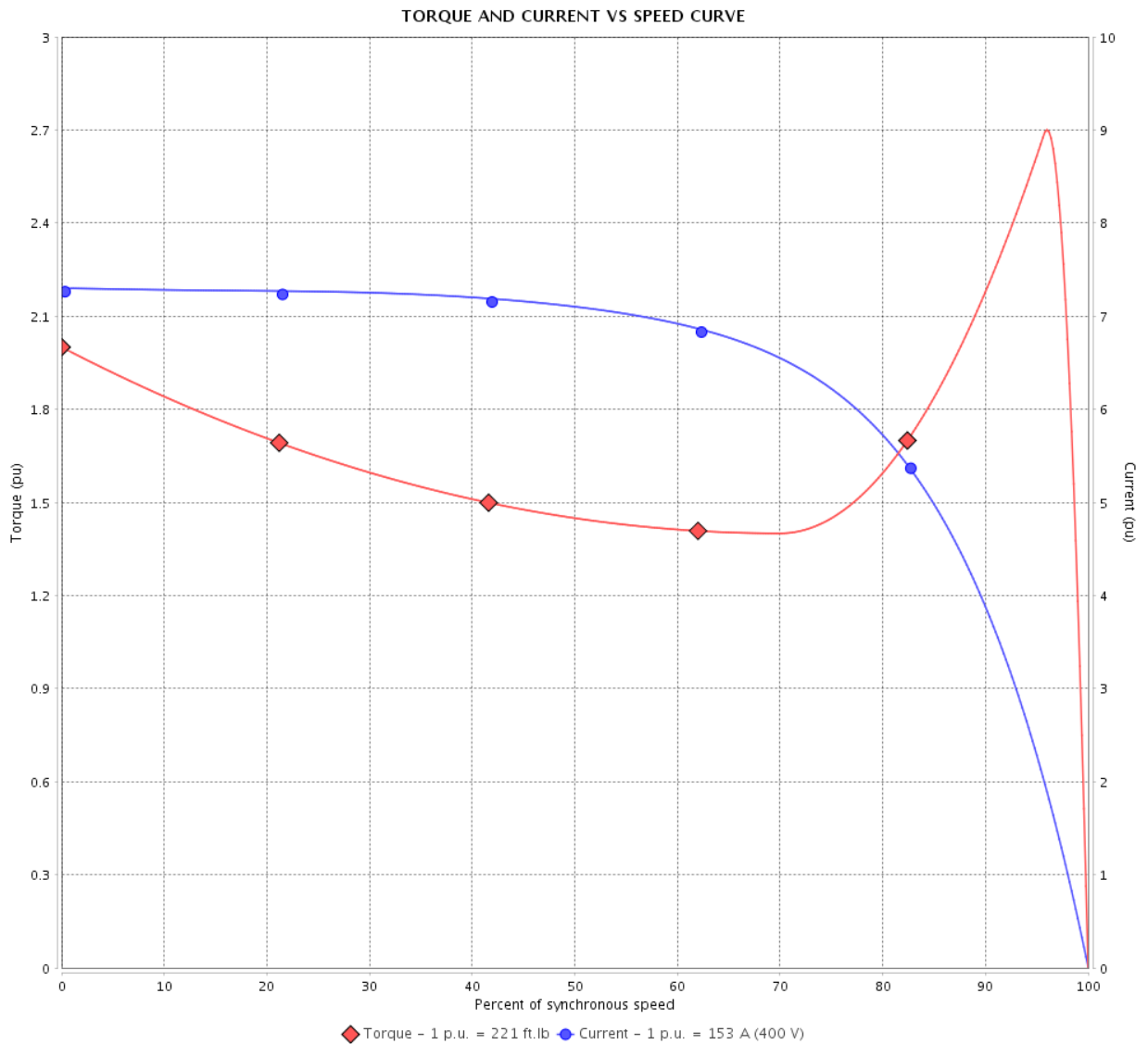
Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11485814

Catalog # : 15036XT3G445TS



Performance : 400 V 50 Hz 2P IE3

Rated current	: 153 A	Moment of inertia (J)	: 39.1 sq.ft.lb
LRC	: 7.3	Duty cycle	: Cont.(S1)
Rated torque	: 221 ft.lb	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.00
Breakdown torque	: 270 %	Temperature rise	: 80 K
Rated speed	: 2975 rpm	Design	: B

Locked rotor time : 45s (cold) 25s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



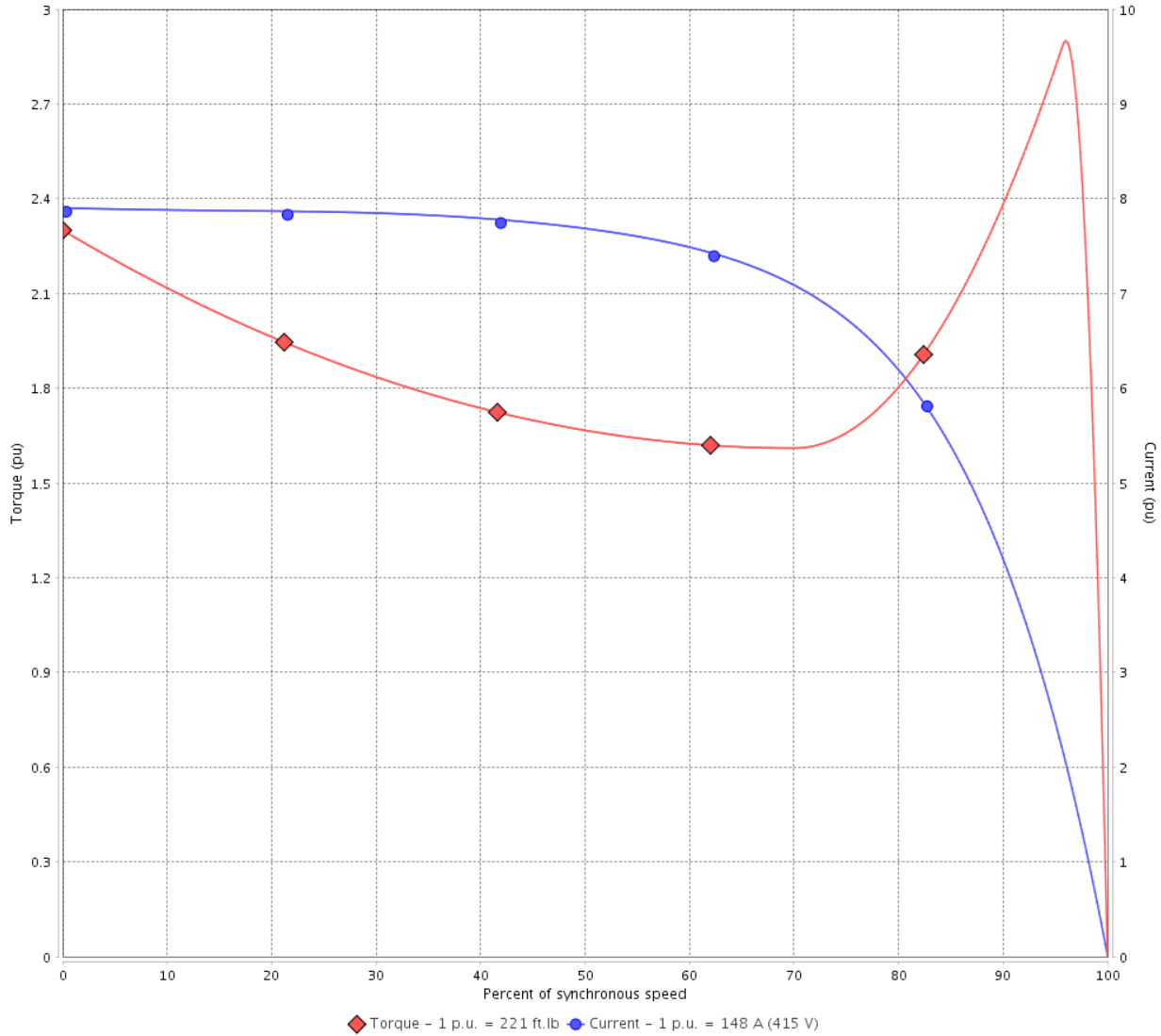
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11485814

Catalog # : 15036XT3G445TS

TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 2P IE3

Rated current	: 148 A	Moment of inertia (J)	: 39.1 sq.ft.lb
LRC	: 7.9	Duty cycle	: Cont.(S1)
Rated torque	: 221 ft.lb	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 2975 rpm	Design	: B

Locked rotor time : 45s (cold) 25s (hot)

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

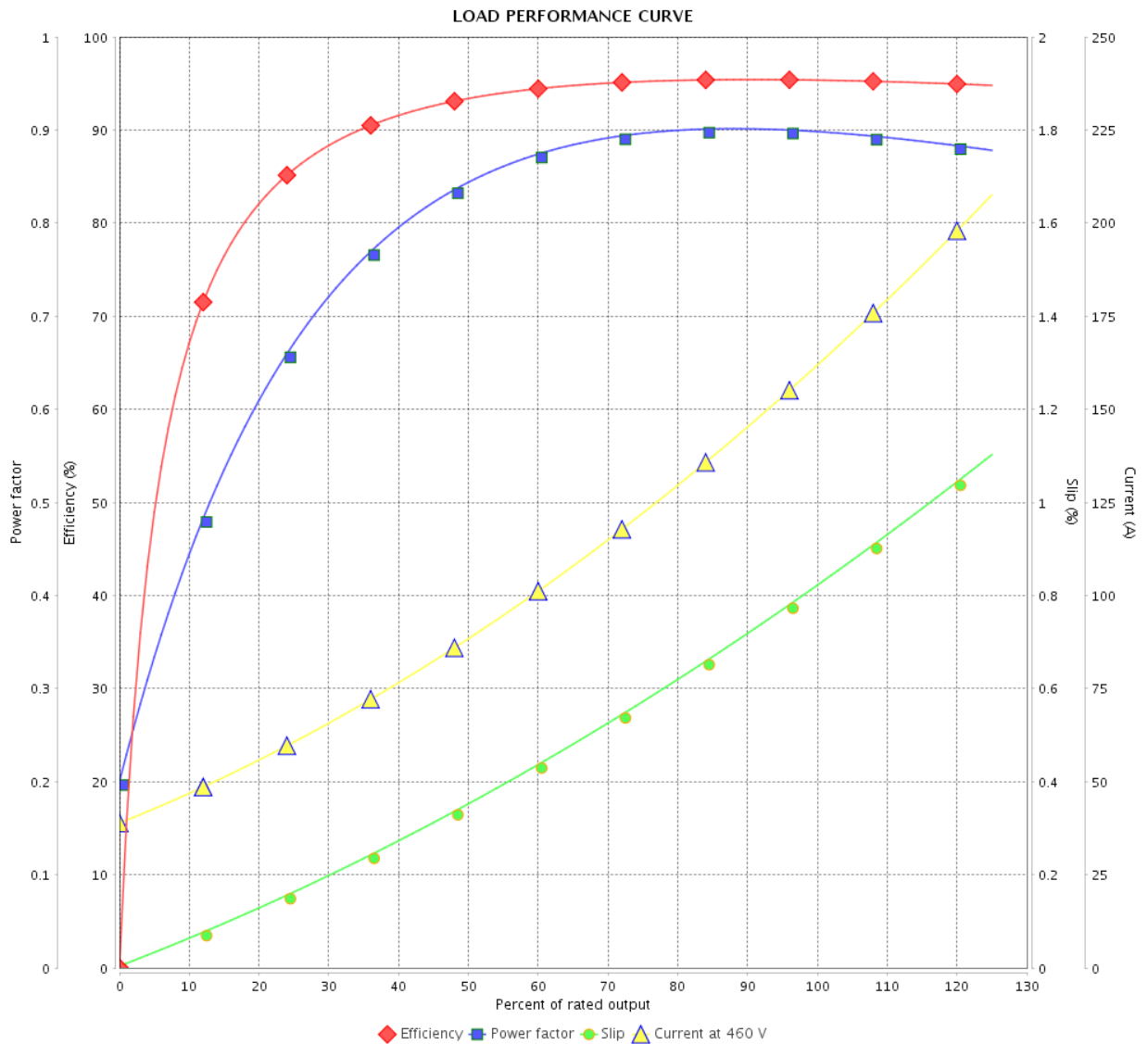


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11485814

Catalog # : 15036XT3G445TS



Performance : 460 V 60 Hz 2P

Rated current : 161 A
 LRC : 7.0
 Rated torque : 221 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 250 %
 Rated speed : 3570 rpm

Moment of inertia (J) : 39.1 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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Three Phase Induction Motor - Squirrel Cage

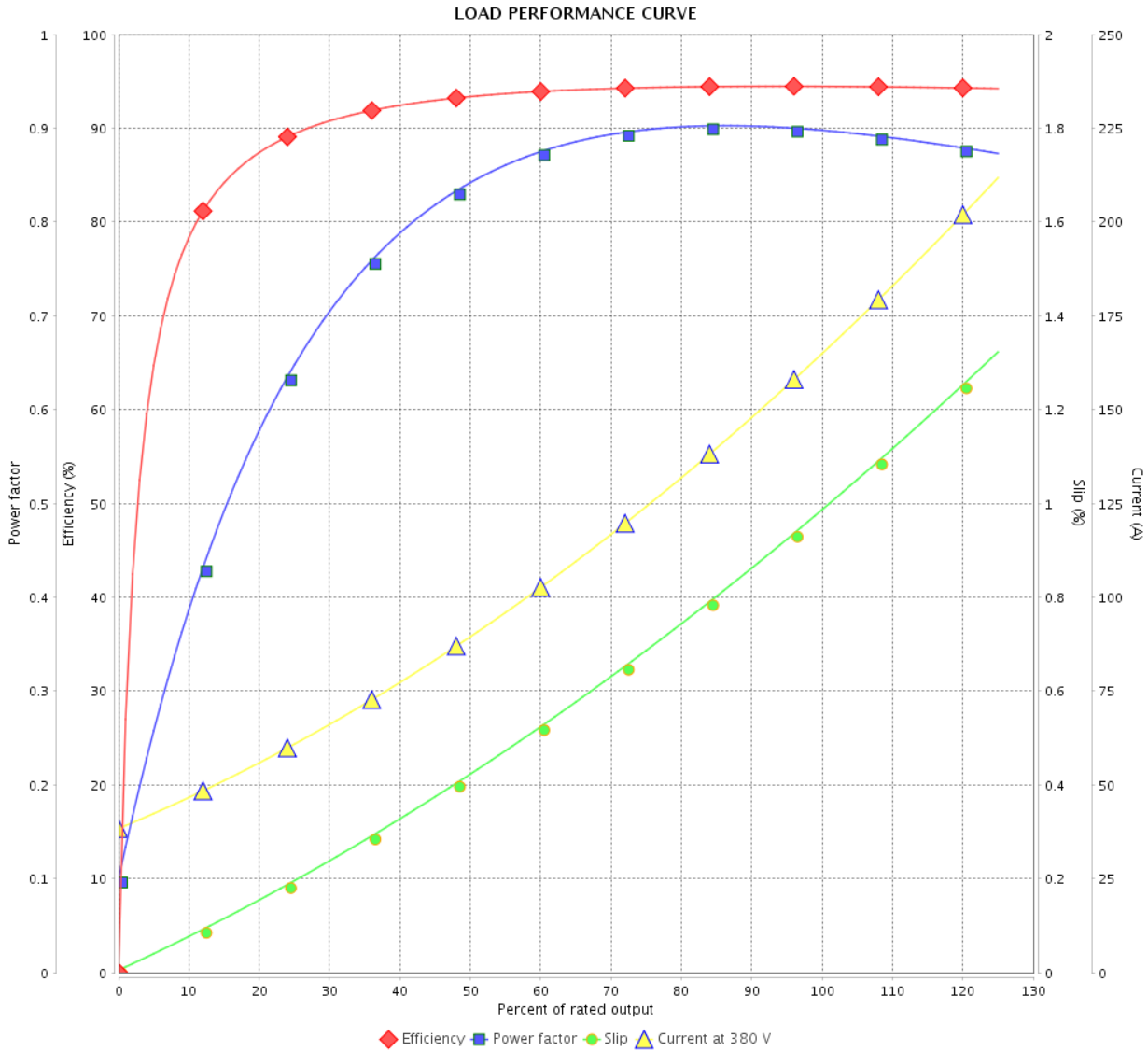


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11485814

Catalog # : 15036XT3G445TS



Performance : 380 V 50 Hz 2P IE2

Rated current : 161 A
 LRC : 6.6
 Rated torque : 221 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 240 %
 Rated speed : 2970 rpm

Moment of inertia (J) : 39.1 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

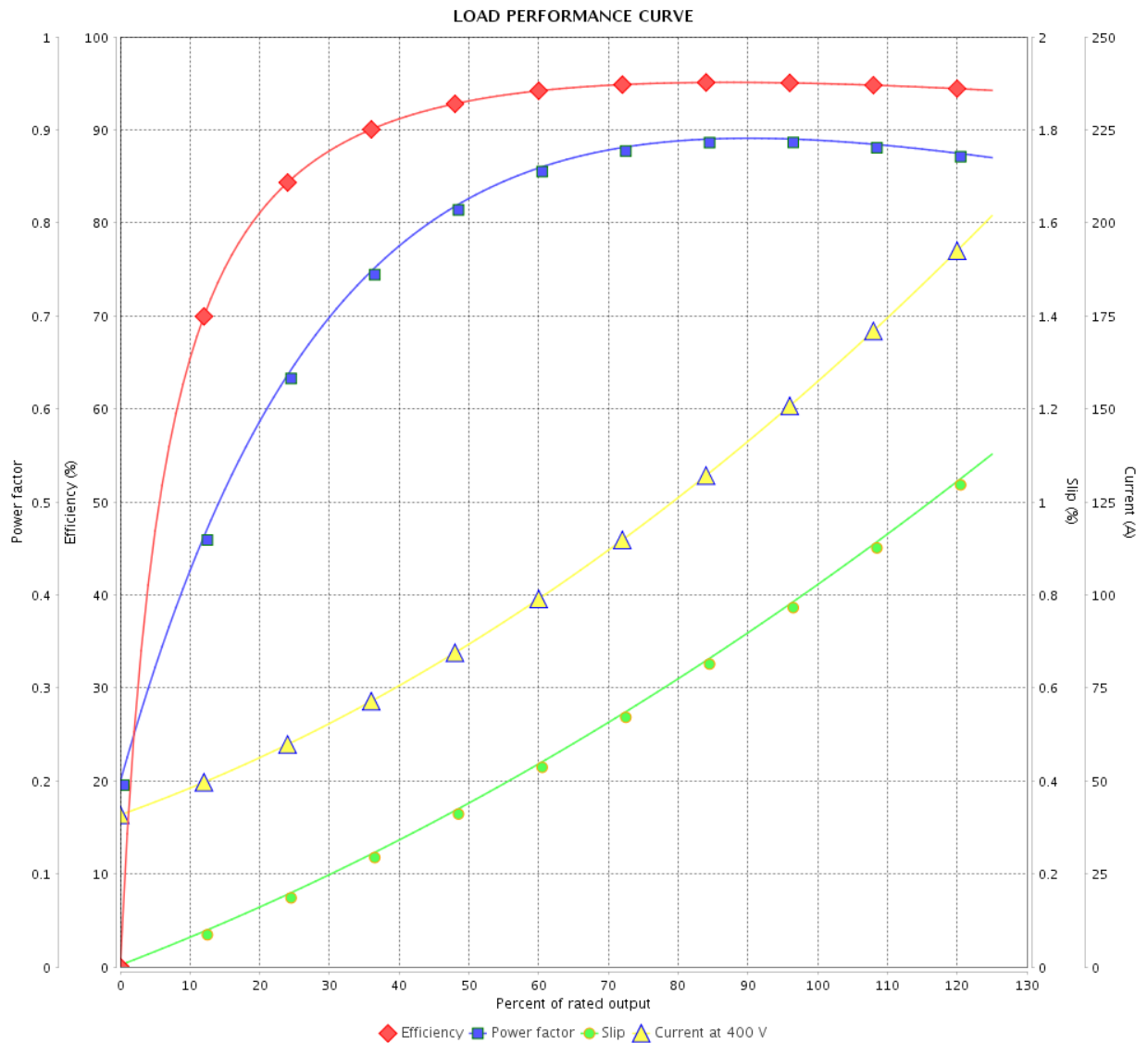


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11485814

Catalog # : 15036XT3G445TS



Performance : 400 V 50 Hz 2P IE3

Rated current : 153 A
 LRC : 7.3
 Rated torque : 221 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 270 %
 Rated speed : 2975 rpm

Moment of inertia (J) : 39.1 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

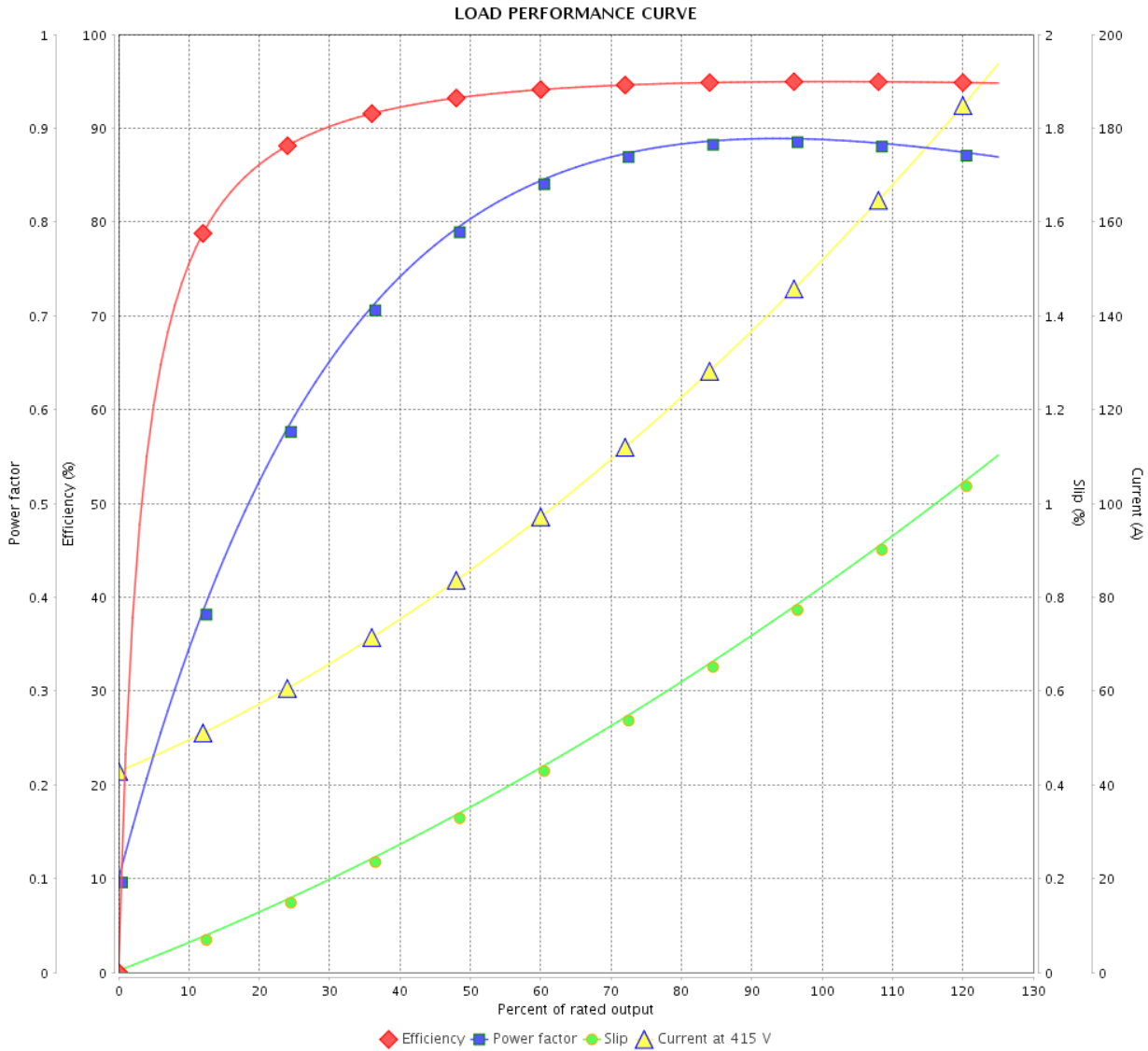


Customer : _____

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11485814

Catalog # : 15036XT3G445TS



Performance : 415 V 50 Hz 2P IE3

Rated current : 148 A
 LRC : 7.9
 Rated torque : 221 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 290 %
 Rated speed : 2975 rpm

Moment of inertia (J) : 39.1 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

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Locked rotor torque : 200 %	Service factor : 1.15
Breakdown torque : 250 %	Temperature rise : 80 K
Rated speed : 3570 rpm	Design : B

Heating constant

Cooling constant

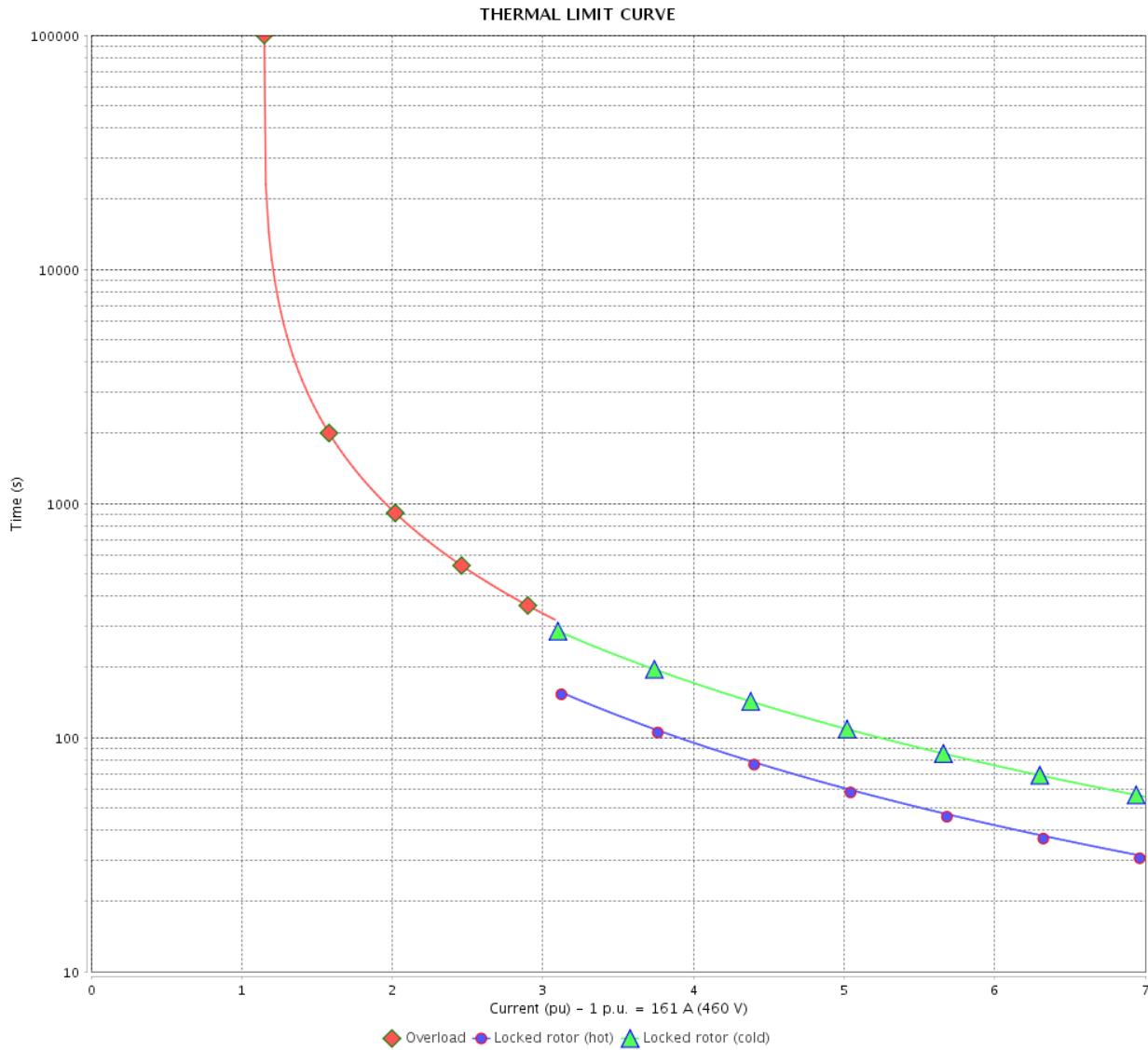
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____



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THERMAL LIMIT CURVE



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Rated torque : 221 ft.lb	Insulation class : F
Locked rotor torque : 190 %	Service factor : 1.00
Breakdown torque : 240 %	Temperature rise : 80 K
Rated speed : 2970 rpm	Design : B

Heating constant

Cooling constant

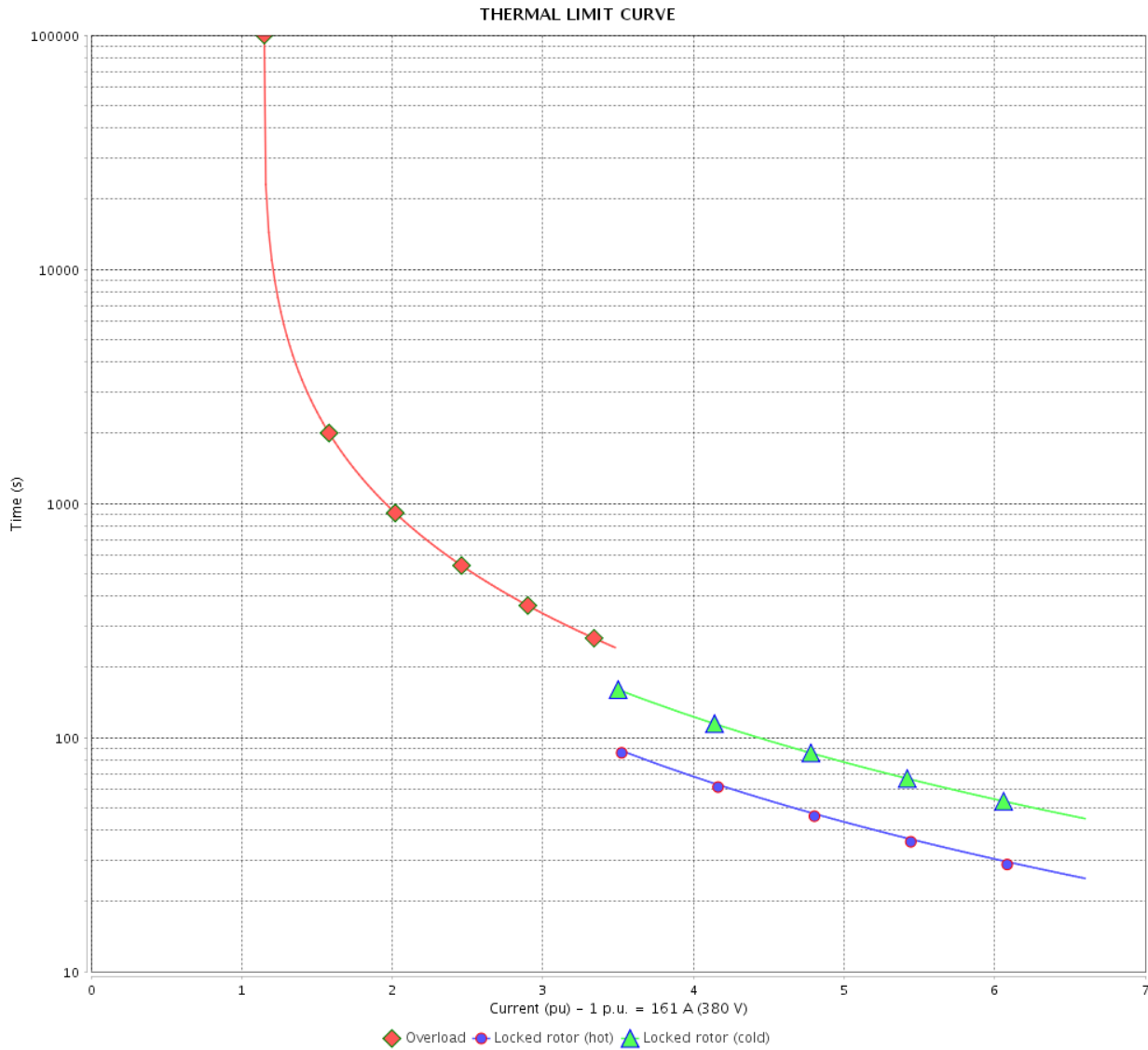
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THERMAL LIMIT CURVE

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THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase
 Product code : 11485814
 Catalog # : 15036XT3G445TS

Performance : 400 V 50 Hz 2P IE3

Rated current : 153 A	Moment of inertia (J) : 39.1 sq.ft.lb
LRC : 7.3	Duty cycle : Cont.(S1)
Rated torque : 221 ft.lb	Insulation class : F
Locked rotor torque : 200 %	Service factor : 1.00
Breakdown torque : 270 %	Temperature rise : 80 K
Rated speed : 2975 rpm	Design : B

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
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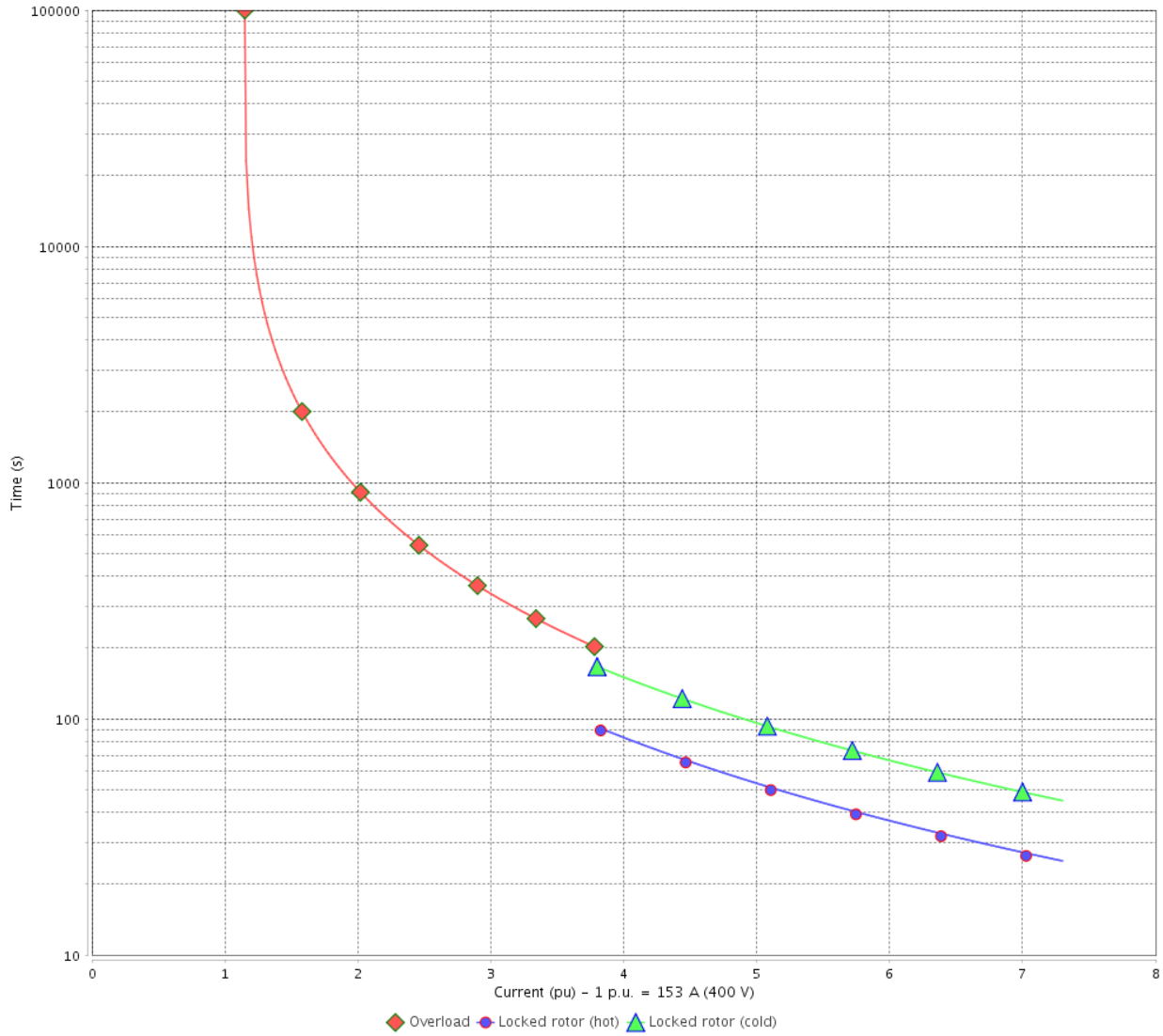
THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____

THERMAL LIMIT CURVE



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Date				

THERMAL LIMIT CURVE



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11485814

Catalog # : 15036XT3G445TS

Performance : 415 V 50 Hz 2P IE3

Rated current : 148 A
 LRC : 7.9
 Rated torque : 221 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 290 %
 Rated speed : 2975 rpm

Moment of inertia (J) : 39.1 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

Heating constant

Cooling constant

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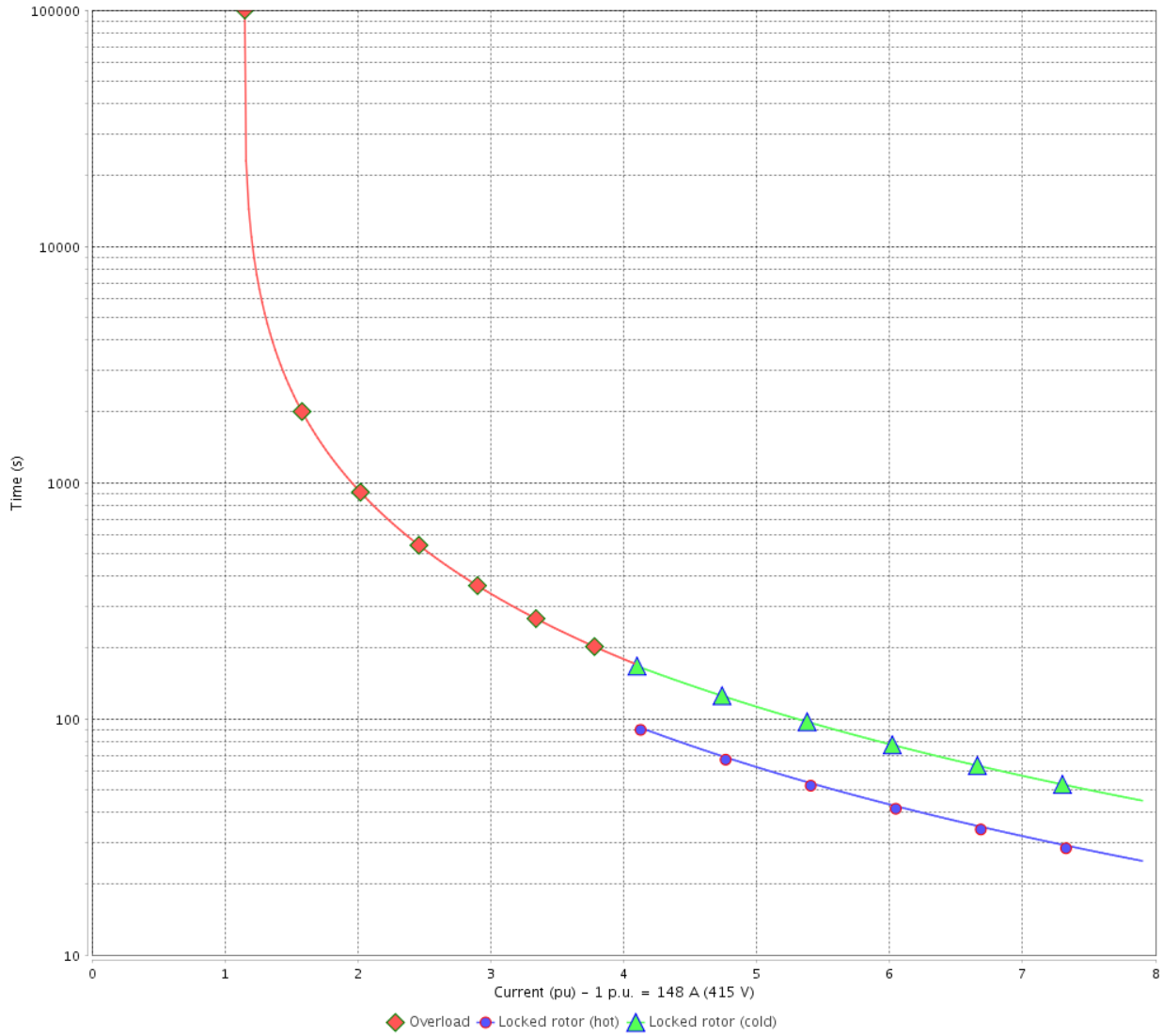
THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : _____

THERMAL LIMIT CURVE



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

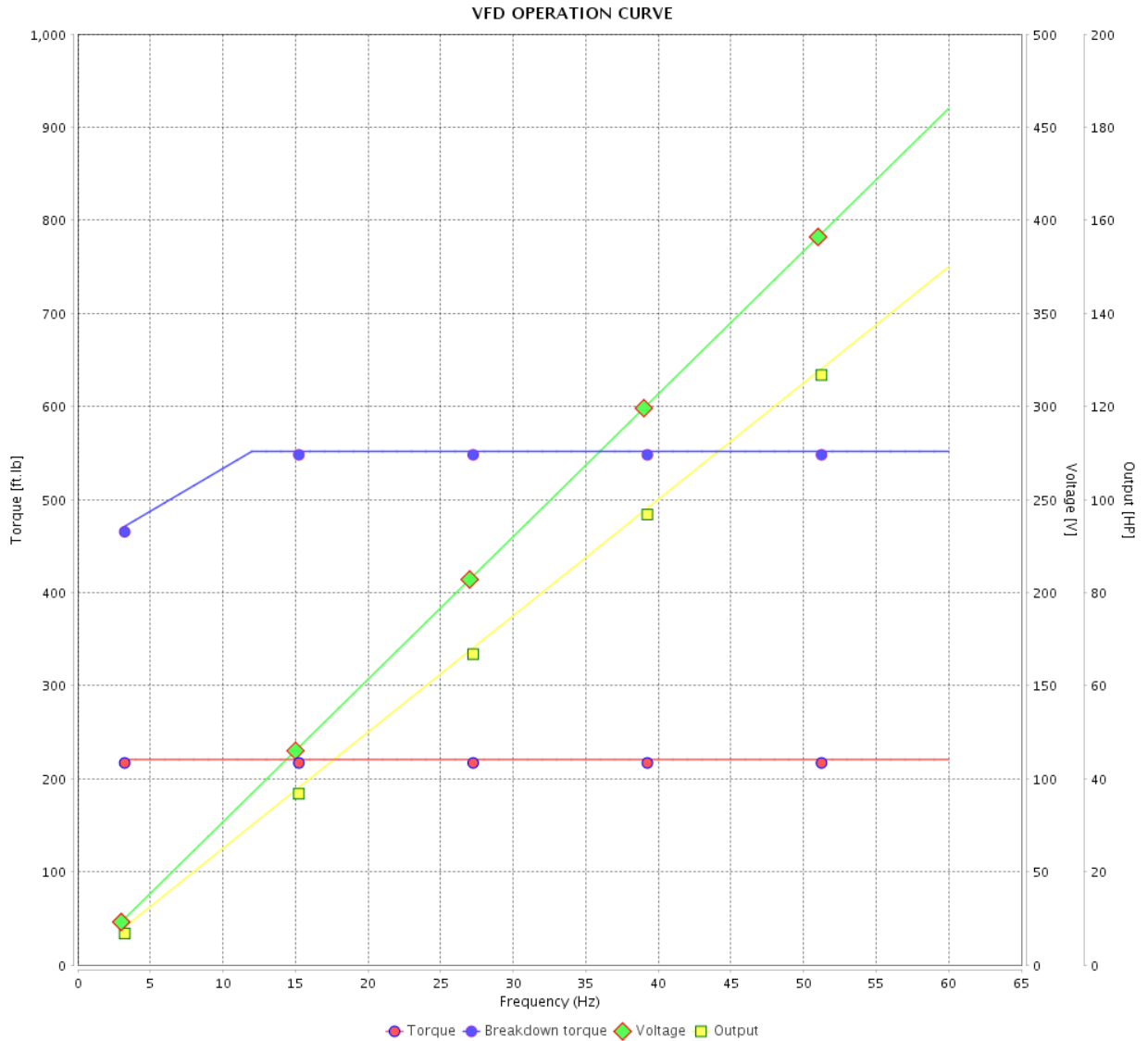


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11485814

Catalog # : 15036XT3G445TS



Performance : 460 V 60 Hz 2P

Rated current : 161 A
 LRC : 7.0
 Rated torque : 221 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 250 %
 Rated speed : 3570 rpm

Moment of inertia (J) : 39.1 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



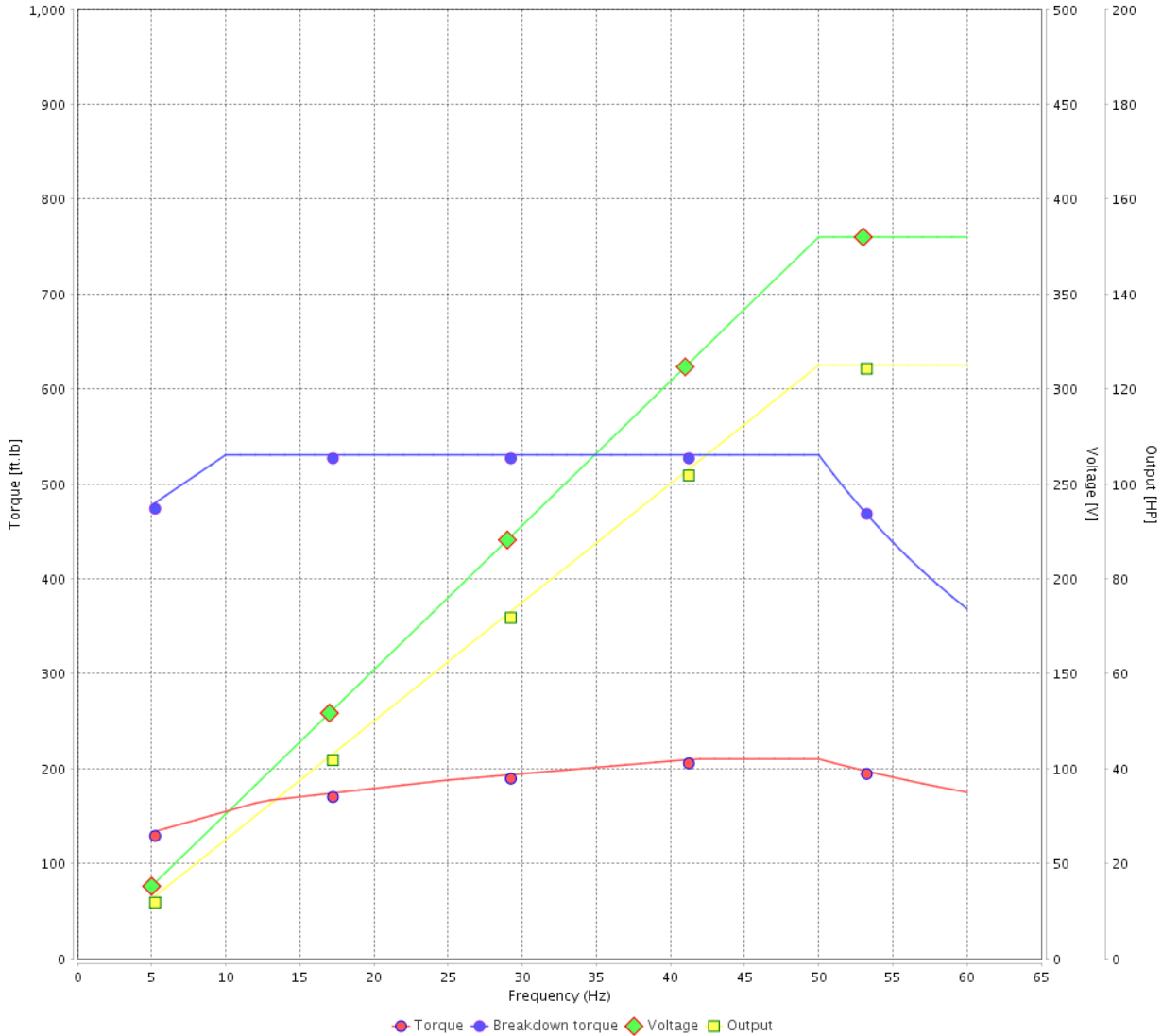
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11485814

Catalog # : 15036XT3G445TS

VFD OPERATION CURVE



Performance : 380 V 50 Hz 2P IE2

Rated current : 161 A
 LRC : 6.6
 Rated torque : 221 ft.lb
 Locked rotor torque : 190 %
 Breakdown torque : 240 %
 Rated speed : 2970 rpm

Moment of inertia (J) : 39.1 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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Date				

VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

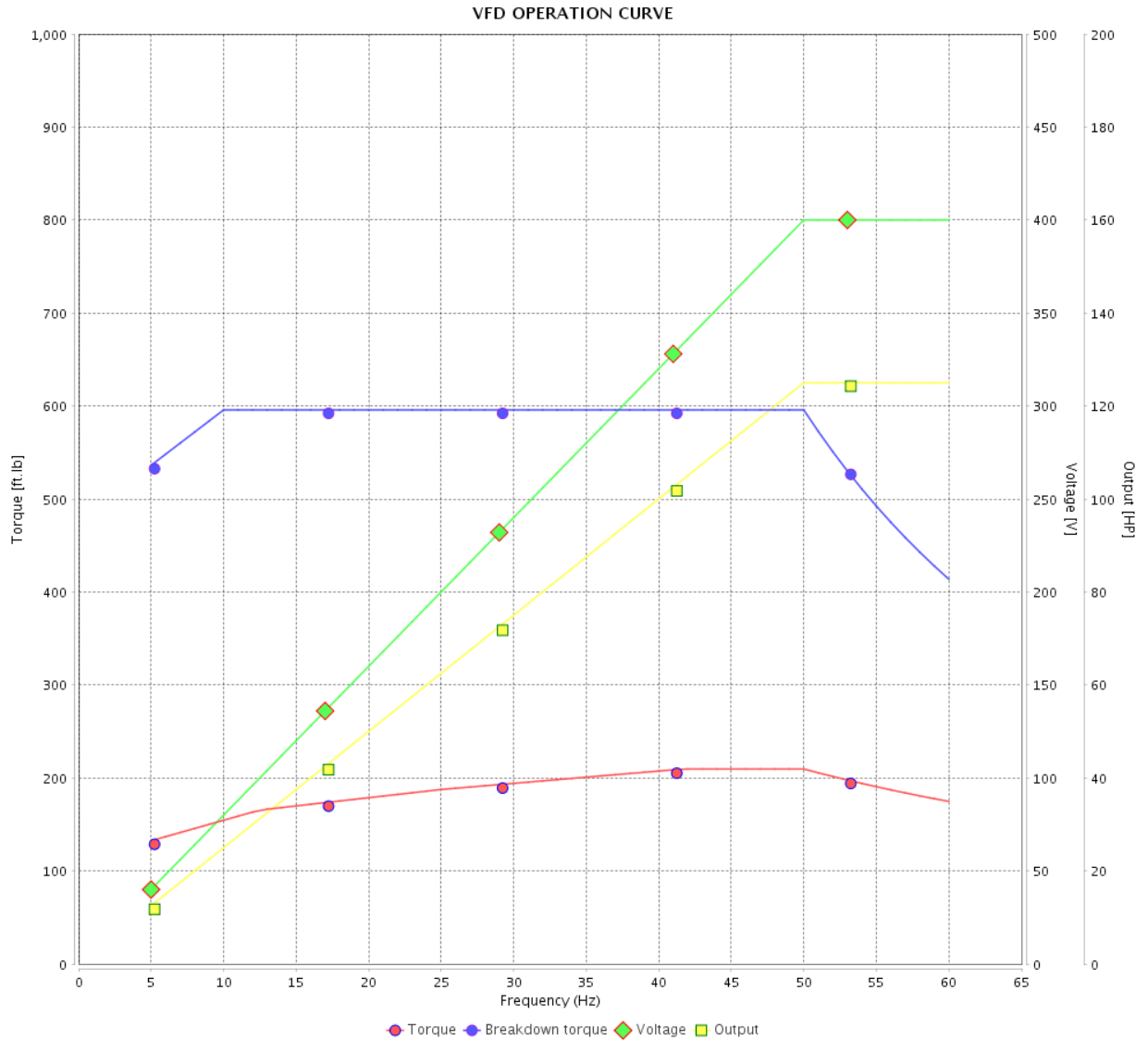


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 11485814

Catalog # : 15036XT3G445TS



Performance : 400 V 50 Hz 2P IE3

Rated current : 153 A
 LRC : 7.3
 Rated torque : 221 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 270 %
 Rated speed : 2975 rpm

Moment of inertia (J) : 39.1 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



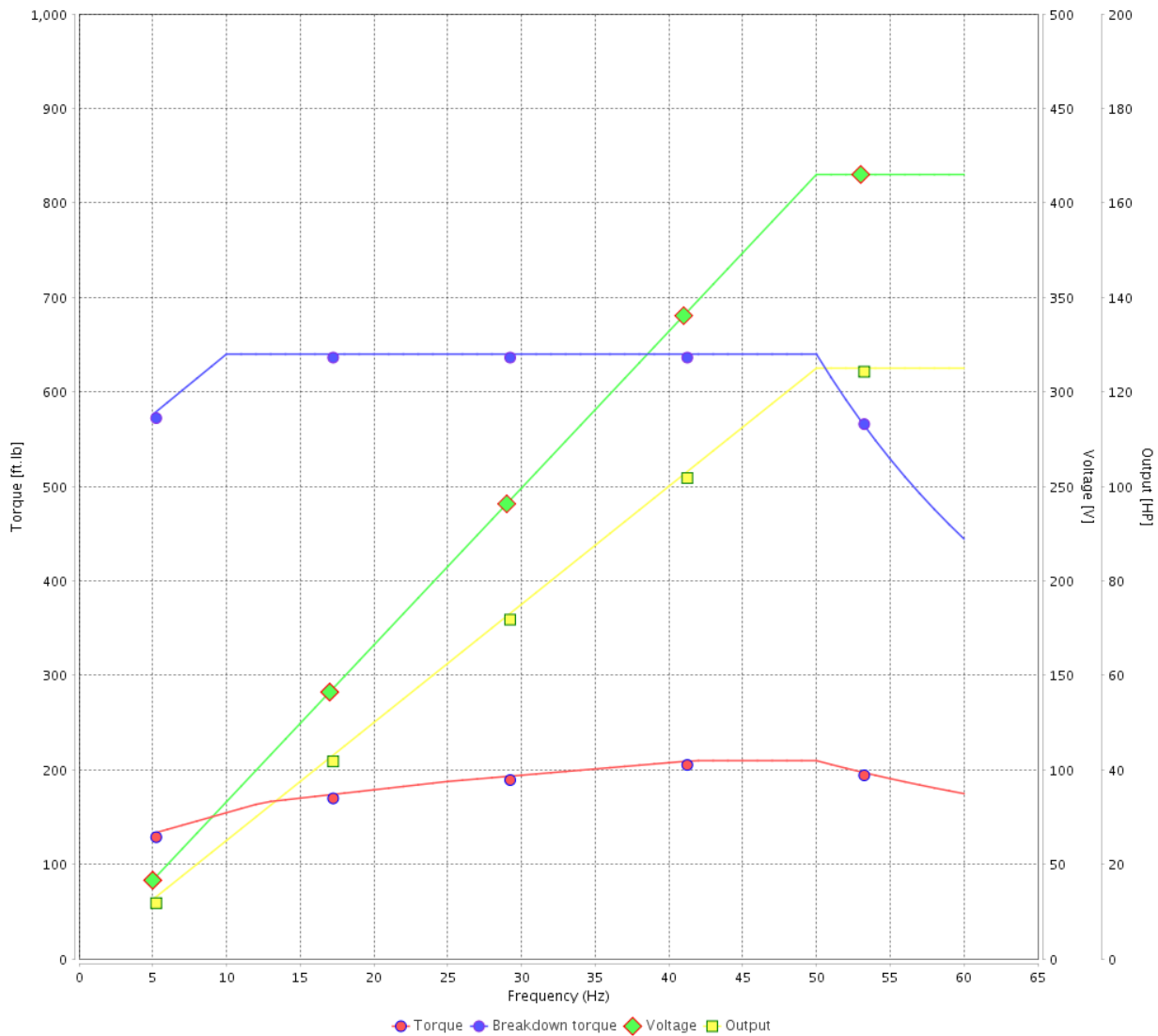
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VFD OPERATION CURVE

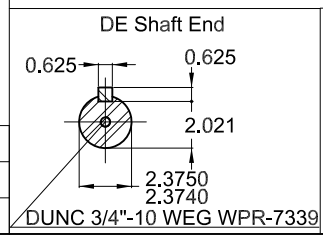
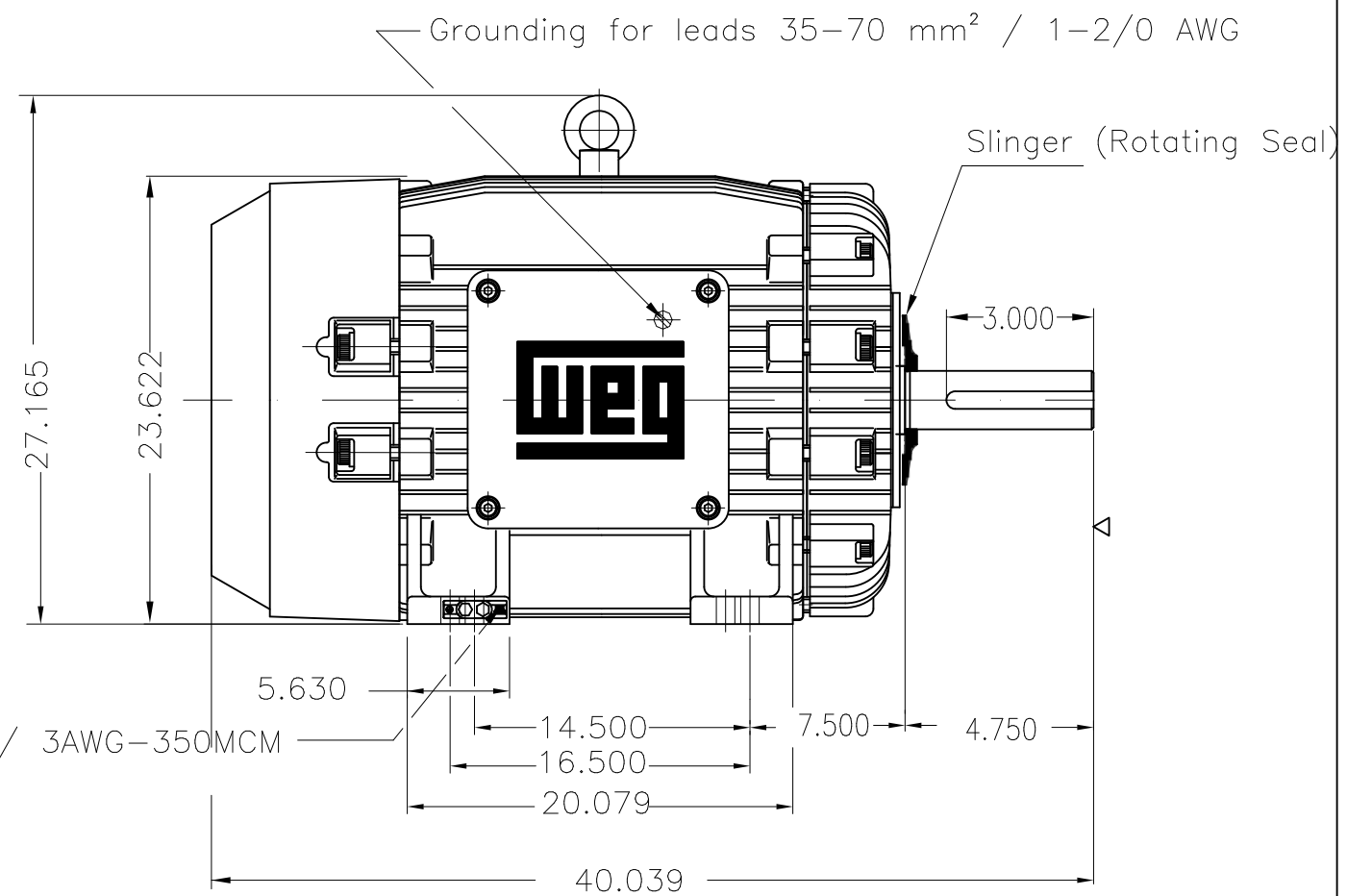
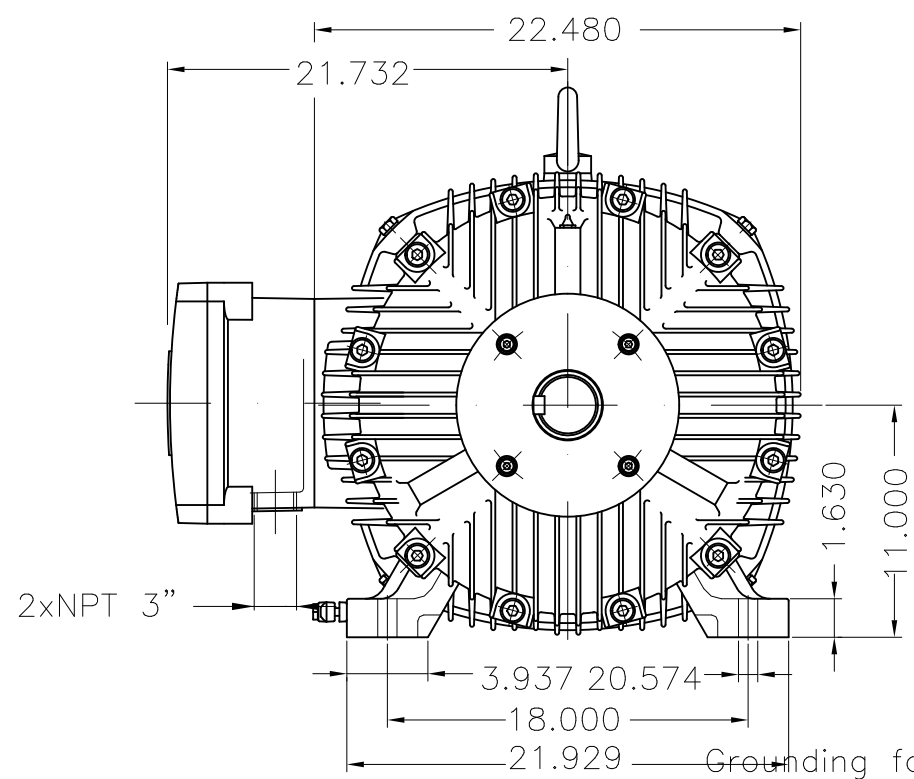


Performance : 415 V 50 Hz 2P IE3

Rated current : 148 A
 LRC : 7.9
 Rated torque : 221 ft.lb
 Locked rotor torque : 229 %
 Breakdown torque : 290 %
 Rated speed : 2975 rpm

Moment of inertia (J) : 39.1 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 80 K
 Design : B

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Color RAL 5009
 Painting plan 202P
 Mounting B3R(D)

150 HP 02 Poles 60 Hz A

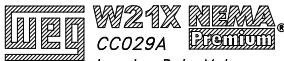
ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWBUSER	THREE PH. MOTOR EXPLOSION PROOF PREM. EFF.					
CHECKED		FRAME 444/5TS IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering				

PREVIEW
 WDD



SHEET 1 / 1

MODEL 15036XT3G445TS
MADE IN BRAZIL
11485814



W21X NEMA
CC029A Premium
Inverter Duty Motor
Severe Duty



TEMP CODE T3C
CSA/UL: Class I - Div. 1 - Groups C and D
CSA: Class II - Div. 1 - Groups F and G
CSA: Class I - Zone 1 - IIB
EXPLOSION PROOF MOTOR

FOR USE ON VPWM VFD 1000:1VT, 2:1CT, 1.0SF, T3C, AMB 40°C.

PH 3	FR 444/5TS	HP(kW) 150(110)	Hz 60
V 460	A 161	RPM 3570	
NEMA NOM. EFF. 95.4%		INS CL F Δ T 80 K	IP55
PF 0.90	DUTY CONT.		CODE G
ENCL. TEFC	SF 1.15	SFA 185	
AMB 40°C	DES B		
AMB 55°C SF1.0	-bearings lub interval reduced by a factor of 50%		

PART-WINDING						WYE-DELTA					
START			RUN			START			RUN		
○T12	○T10	○T11	○T12	○T10	○T11	○T12	○T10	○T11	○T12	○T10	○T11
○T7	○T8	○T9	○T7	○T8	○T9	○T6	○T4	○T5	○T6	○T4	○T5
○T6	○T4	○T5	○T6	○T4	○T5	○T7	○T8	○T9	○T7	○T8	○T9
○T1	○T2	○T3	○T1	○T2	○T3	○T1	○T2	○T3	○T1	○T2	○T3
L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3

→ 6314-C3(27g) MOBIL POLYREX EM
 → 6314-C3(27g) 3604 h

ALT 1000 m.a.s.l 2180 Lbs